Choosing and caring for your HARRIS MORAN pumpkins

The right variety for you
HARRIS MORAN offers many features of pumpkins to fill all market slots. In addition to having various shapes and sizes, HARRIS MORAN varieties feature pumpkins with the dark rich color, strong handles and disease resistances that enhance the appearance and value of the pumpkin.

Fertility
Before planting, we recommend that you sample the soil. An ideal pH ranges from 6.0 to 7.0. You may need to amend your soil to achieve this level with high calcium and low magnesium limestone, as your soil test warrants. Once you have the appropriate pH, you should apply the major and minor soil nutrients (NPK) at the proper levels.

Pollination
Pumpkins sport both male and female flowers. The plants must be insect pollinated – honeybees being the main pollinators. Multiple visits to each flower are necessary for pollination – about 15 visits per flower. Place beehives in the field when flowers begin opening, usually when the third node forms on the plant. Leave beehives in the field for only 35 days. Location and timing of pollination is key because research shows honeybees prefer other types of plants from which they get more nectar and pollen. Keep the bees interested in pollinating the pumpkin patch by placing the hives in the proper area at the proper time.

Credit for information used: Maryland Cooperative Extension, Fact Sheet 454 • Bob Rouse – University of Maryland Regional Fruit and Vegetable Specialist • Charles McClurg – Extension Vegetable Specialist University of Maryland • Alan McNab – Penn State Univ. Extension Plant Pathologist • Ron Morse – Virginia Polytechnic Institute and University, Vegetable Crop Specialist
Planting and spacing
Proper soil depth at planting, along with spacing intervals, can also make or break a crop. Recommended planting dates usually run from late May to early July, depending on your location. You may want to consider multiple planting dates to provide pumpkins for an extended harvest period. Seeds are most often planted at a depth of 1 to 2 inches depending upon the soil moisture at the time of planting. Remember, you need good seed-to-soil contact for optimum germination. Seeding rates per acre, as well as spacing, should be selected based upon the variety of pumpkin. Each variety has an ideal spacing for optimum performance. A heavy stand can stress your plant and restrict growth thus influencing the size and set of your pumpkins. In work done by Ron Morse, Virginia Polytechnic Institute and University, optimum yield was achieved by using a semi-bush plant such as Magic Lantern and equilateral spacing (4ft x 4ft). This type of spacing produced 25% more marketable pumpkins than other spacings with the same number of square feet (8ft x 2ft).

Managing pests in your production field
- Weeds can prevent bees from pollinating flowers. They also serve as hosts for insects which can spread harmful viruses.
- Insects can introduce viruses to a field. These infestations lead to restriction of size, greenness, and lumpiness of the pumpkin fruit.
- Diseases can jeopardize your pumpkin crop. Phytophthora Blight, Black Rot, Mosaic Viruses and Powdery Mildew are just some of the major diseases that can do harm. Each of these pests can be controlled by numerous methods including: good crop rotation, soil drainage, varietal resistance, proper planting time, seeding rate, and regular use of pesticides.

Harvest, handling, and storing pumpkins
If you want maximum tonnage from your pumpkin crop, it is imperative you harvest your fruit at its optimum maturity. If pumpkins are left on the vine past maturity they will actually decrease in weight as each day passes. This can reduce the final tonnage of your field. When harvesting for wholesale be sure to harvest and stack the pumpkins carefully in the bins so you don’t injure the fruit. Injured fruit offer the perfect points of entry for post-harvest disease.

The USDA Agriculture Handbook suggests the following steps be taken for proper pumpkin storage:
- Ideal storage temp should be between 50 to 55 degrees F
- Relative humidity should be no more than 70% and no less than 50%
- The harvested pumpkins should be placed on racks, in bins or in baskets
<table>
<thead>
<tr>
<th>Pumpkin Name</th>
<th>Description</th>
<th>Attributes</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRUNCHKIN</td>
<td>Excellent choice for the decorative pumpkin class.</td>
<td>Ornamental scalloped type, Concentrated high yield, Speckled, hard shell exterior that darkens as it ages</td>
<td>0.5lb</td>
</tr>
<tr>
<td>MUNCHKIN</td>
<td>Miniature ornamental for speciality markets.</td>
<td>Early maturity, Full vine with good yield, Excellent bright orange color, Trim stems for easy packing</td>
<td>0.5lb</td>
</tr>
<tr>
<td>APPRENTICE</td>
<td>Mini pumpkin with a giant personality.</td>
<td>Hard shell, High yielding variety, Very uniform fruit, Irresistible in the market</td>
<td>1lb</td>
</tr>
<tr>
<td>LIL’ PUMP-KE-MON</td>
<td>Unique white ornamental mini pumpkin with orange stripes.</td>
<td>Large, stocky plant, Very uniform fruit, Concentrated set, Weight: 1-2lb</td>
<td></td>
</tr>
<tr>
<td>CANNON BALL</td>
<td>A superb pie pumpkin, perfect for painting.</td>
<td>Vigorous plant, Excellent orange color, Large, firmly rooted handle, Heavy fruits</td>
<td>3-5lb</td>
</tr>
<tr>
<td>MISCHIEF</td>
<td>Perfect size for both chain stores and roadside stands.</td>
<td>Can be carved or painted, High yields of uniform fruit, Dark orange with a dark, strongly attached handle</td>
<td>3-5lb</td>
</tr>
<tr>
<td>FIELD TRIP</td>
<td>Perfect for school pumpkin patches!</td>
<td>Distinctive long handle, Flat and ribby, Very uniform in shape/size</td>
<td>5-7lb</td>
</tr>
<tr>
<td>MYSTIC PLUS</td>
<td>Traditional pie filling pumpkin with production potential.</td>
<td>Great tasting pie filler, Top yields, excellent producer, Minimal handle breakage, Ideal for children to carry</td>
<td>5-7lb</td>
</tr>
<tr>
<td>WARTY GOBLIN</td>
<td>Frighteningly cool!</td>
<td>Heavily warty pumpkins with a very high yield, Excellent pumpkin for patches and roadside stores, Hard shell for durability</td>
<td>8-20lb</td>
</tr>
<tr>
<td>ORANGE SUNRISE</td>
<td>A precocious medium pumpkin with great color!</td>
<td>Early-maturing variety, Enticing deep orange color, Excellent round shape and size</td>
<td>15-20lb</td>
</tr>
</tbody>
</table>
**MAGIC LANTERN**
The high standard by which all other varieties are judged.
- Attractive, classy appearance
- Upright shape, classic look
- High yield potential
- Easy harvest management
- Weight: 15-25lb

**MAGIC WAND**
High yielding even during hot seasons.
- Attractive, uniform round to slightly flat shape
- Large, firmly rooted handle
- Smooth and lightly-ribbed
- Weight: 15-25lb

**ZEUS**
Olympic quality pumpkin.
- Large, firmly-attached handle
- Good yield on a strong vine
- Attractive, medium-sized fruit
- Consistent size for shipping
- Weight: 16-20lb

**GLADIATOR**
A proven performer in many environments.
- Vigorous plant
- Consistent high yield
- Excellent color
- Weight: 20-30lb

**RHEA**
A beautiful pumpkin that has a handle to match!
- Consistent yielding
- Large vigorous vine
- Dark orange color
- For roadside and shipping
- Weight: 20-30lb

**ARES**
Tall, strong, warrior pumpkin.
- Large, firmly-attached handle
- Unique, upright shape
- Excellent yield potential
- Uniform shape and size
- 22-28lb

**APOLLO**
Exciting large size pumpkin to compliment Aladdin.
- Medium dark orange color
- Medium ribbing
- Improved handle size & handle attachment
- Weight: 18-32lb

**KRATOS**
Strong, powerful pumpkin.
- Large, firmly-attached handle
- Strong vine
- Good yield, grower friendly
- Large, flat-round, medium-ribbed fruit
- Weight: 20-30lb

**ALADDIN**
Beautiful large-sized pumpkin.
- Uniform size and yield
- Firmly rooted handle
- Dark orange color
- Weight: 25-35lb

**CRONUS**
Extra-large pumpkin. A must have for every patch!
- Excellent yields
- Exceptionally vigorous vine
- Dark orange color
- Large, firmly attached handle
- Weight: 25-60
# Pumpkins
## Commercial Varieties Comparative Table

<table>
<thead>
<tr>
<th>Variety</th>
<th>Size</th>
<th>Shape</th>
<th>Color</th>
<th>Hard Shell</th>
<th>Weight (lbs)</th>
<th>Between row feet</th>
<th>In-row feet</th>
<th>Square feet</th>
<th>Px</th>
<th>ZYMV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crunchkin</td>
<td>Mini</td>
<td>Flattened/scalloped</td>
<td>Bright orange</td>
<td>✓</td>
<td>0.5</td>
<td>4-6</td>
<td>1-2</td>
<td>4-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Munchkin</td>
<td>Mini</td>
<td>Flattened/scalloped</td>
<td>Bright orange</td>
<td></td>
<td>0.5</td>
<td>4-6</td>
<td>1-2</td>
<td>4-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apprentice</td>
<td>Mini</td>
<td>Round to flat round</td>
<td>Orange</td>
<td>✓</td>
<td>1</td>
<td>4-6</td>
<td>1-2</td>
<td>4-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lil Pump-Ke-Mon</td>
<td>Mini</td>
<td>Flattened/scalloped</td>
<td>White with distinct stripes</td>
<td></td>
<td>1-2</td>
<td>4-6</td>
<td>1-2</td>
<td>4-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannon Ball</td>
<td>Small</td>
<td>Round to upright</td>
<td>Orange to dark orange</td>
<td></td>
<td>3-5</td>
<td>5-6</td>
<td>2-3</td>
<td>10-18</td>
<td>IR</td>
<td></td>
</tr>
<tr>
<td>Mischief</td>
<td>Small</td>
<td>Tall round</td>
<td>Orange</td>
<td></td>
<td>3-5</td>
<td>5-6</td>
<td>2-3</td>
<td>10-18</td>
<td>IR</td>
<td></td>
</tr>
<tr>
<td>Field Trip</td>
<td>Small</td>
<td>Flattened</td>
<td>Orange to dark orange</td>
<td></td>
<td>5-7</td>
<td>5-6</td>
<td>2-3</td>
<td>10-18</td>
<td>IR</td>
<td></td>
</tr>
<tr>
<td>Mystic Plus</td>
<td>Small</td>
<td>Round</td>
<td>Orange to dark orange</td>
<td></td>
<td>5-7</td>
<td>5-6</td>
<td>2-3</td>
<td>10-18</td>
<td>IR</td>
<td></td>
</tr>
<tr>
<td>Warty Goblin</td>
<td>Medium</td>
<td>Flat round</td>
<td>Orange with green warts</td>
<td>✓</td>
<td>8-20</td>
<td>3-4</td>
<td>4-5</td>
<td>12-20</td>
<td>IR</td>
<td></td>
</tr>
<tr>
<td>Orange Sunrise</td>
<td>Medium</td>
<td>Round</td>
<td>Orange</td>
<td></td>
<td>15-20</td>
<td>3-4</td>
<td>4-5</td>
<td>12-20</td>
<td>IR</td>
<td></td>
</tr>
<tr>
<td>Magic Lantern</td>
<td>Medium</td>
<td>Slightly upright</td>
<td>Dark orange</td>
<td></td>
<td>15-25</td>
<td>3-4</td>
<td>4-5</td>
<td>12-20</td>
<td>IR</td>
<td></td>
</tr>
<tr>
<td>Magic Wand</td>
<td>Medium</td>
<td>Round, slightly flat</td>
<td>Dark orange</td>
<td></td>
<td>15-25</td>
<td>3-4</td>
<td>4-5</td>
<td>12-20</td>
<td>IR</td>
<td></td>
</tr>
<tr>
<td>Zeus</td>
<td>Medium</td>
<td>Round</td>
<td>Medium dark orange</td>
<td></td>
<td>16-20</td>
<td>4-6</td>
<td>4-6</td>
<td>18-36</td>
<td>IR</td>
<td>IR</td>
</tr>
<tr>
<td>Gladiator</td>
<td>Medium</td>
<td>Deep round</td>
<td>Orange to deep orange</td>
<td></td>
<td>20-30</td>
<td>8-12</td>
<td>3-4</td>
<td>24-48</td>
<td>IR</td>
<td></td>
</tr>
<tr>
<td>Rhea</td>
<td>Medium</td>
<td>Flat round</td>
<td>Dark orange</td>
<td></td>
<td>20-30</td>
<td>8-12</td>
<td>3-4</td>
<td>24-48</td>
<td>IR</td>
<td></td>
</tr>
<tr>
<td>Ares</td>
<td>Medium</td>
<td>Upright</td>
<td>Medium dark orange</td>
<td></td>
<td>22-28</td>
<td>8-12</td>
<td>3-4</td>
<td>24-48</td>
<td>IR</td>
<td></td>
</tr>
<tr>
<td>Apollo</td>
<td>Large</td>
<td>Round to tall</td>
<td>Dark orange</td>
<td></td>
<td>18-32</td>
<td>8-12</td>
<td>3-4</td>
<td>24-48</td>
<td>IR</td>
<td></td>
</tr>
<tr>
<td>Kratos</td>
<td>Large</td>
<td>Flat-round</td>
<td>Medium dark orange</td>
<td></td>
<td>20-30</td>
<td>8-12</td>
<td>3-4</td>
<td>24-48</td>
<td>IR</td>
<td></td>
</tr>
<tr>
<td>Aladdin</td>
<td>Large</td>
<td>Round to tall</td>
<td>Orange to deep orange</td>
<td></td>
<td>25-35</td>
<td>8-12</td>
<td>3-4</td>
<td>24-48</td>
<td>IR</td>
<td></td>
</tr>
<tr>
<td>Cronus</td>
<td>Large</td>
<td>Round-flat</td>
<td>Dark orange</td>
<td></td>
<td>25-60</td>
<td>8-12</td>
<td>4-6</td>
<td>48-75</td>
<td>IR</td>
<td></td>
</tr>
</tbody>
</table>

Data and Disease Ratings are an average of results from various test locations. It is not a prediction of future performance, but a summary of past results. Your performance will vary depending on the actual environment, pathogen strain and management conditions in your field. The HM.CLAUSE, Inc. Limitation of Warranty and Liability and Use Restriction is a condition of purchase of all Harris Moran and HM.CLAUSE seed. To preview the Limitation of Warranty and Liability and Use Restriction, please visit the HM.CLAUSE, Inc. website found at www.hmclause.com or call HM.CLAUSE, Inc. for more information.

Common name | Abbreviation | Pathogen/Causal agent
-------------|--------------|--------------------------------------------------
Powdery mildew | Px | *Podosphaera xanthii* (ex *Sphaerotheca fuliginea*)
Zucchini yellows | ZYMV | Zucchini Yellow Mosaic Virus
Quick Reference Guide

- Crunchkin
- Munchkin
- Apprentice
- Lil Pump-ke-mon
- Cannon Ball
- Field Trip
- Mystic Plus
- Mischief
- Warty Goblin
- Orange Sunrise
- Zeus
- Magic Lantern
- Magic Wand
- Gladiator
- Ares
- Apollo
- Kratos
- Aladdin
- Cronus

NEW

Mini
Small
Medium
Large